



July 15, 2016

Meagan E. Ormand Golder Associates Inc. 2108 W. Laburnum Ave. Suite 200 Richmond, VA 23227

RE: Project: Bremo Monthly Process Pace Project No.: 92304692

Dear Meagan Ormand:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicole Gasiorowski

Micolo Yasiorovske

nicole.gasiorowski@pacelabs.com

Project Manager

Enclosures





Huntersville, NC 28078 (704)875-9092



July 15, 2016 Page 2

cc: Ron DiFrancesco, Golder Associates Inc. Martha Smith, Golder Associates Inc. Mike Williams, Golder Associates Inc



REPORT OF LABORATORY ANALYSIS

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9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092



CERTIFICATIONS

Project: Bremo Monthly Process

Pace Project No.: 92304692

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174

Alabama Certification #: 41320 Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079 Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification: #346 Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236 Montana Certification #: Cert 0074 Nebraska Certification: NE-OS-28-14

Nevada Certification: FL NELAC Reciprocity

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

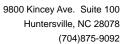
US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity

West Virginia Certification #: 9962C Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS





SAMPLE ANALYTE COUNT

Project: Bremo Monthly Process

Pace Project No.: 92304692

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory	
92304692001	T2-160711-2141-S3	EPA 200.7	RVK	8	PASI-O	_

REPORT OF LABORATORY ANALYSIS

(704)875-9092



PROJECT NARRATIVE

Project: Bremo Monthly Process

Pace Project No.: 92304692

Method: EPA 200.7
Description: 200.7 MET ICP

Client: Golder_Dominion_Bremo

Date: July 15, 2016

General Information:

1 sample was analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

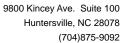
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





ANALYTICAL RESULTS

Project: Bremo Monthly Process

Pace Project No.: 92304692

Date: 07/15/2016 11:42 AM

Sample: T2-160711-2141-S3	Lab ID: 9230)4692001	Collected: 07/11/1	6 21:4	Received: 07	7/12/16 14:02 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Meth	od: EPA 20	0.7 Preparation Me	hod: El	PA 200.7			
Aluminum	258	ug/L	100	1	07/14/16 06:44	07/14/16 16:25	7429-90-5	
Barium	381	ug/L	10.0	1	07/14/16 06:44	07/14/16 16:25	7440-39-3	
Beryllium	ND	ug/L	1.0	1	07/14/16 06:44	07/14/16 16:25	7440-41-7	
Boron	765	ug/L	50.0	1	07/14/16 06:44	07/14/16 16:25	7440-42-8	
Cobalt	ND	ug/L	10.0	1	07/14/16 06:44	07/14/16 16:25	7440-48-4	
Iron	ND	ug/L	250	1	07/14/16 06:44	07/14/16 16:25	7439-89-6	
Molybdenum	81.6	ug/L	10.0	1	07/14/16 06:44	07/14/16 16:25	7439-98-7	
Vanadium	27.1	ug/L	10.0	1	07/14/16 06:44	07/14/16 16:25	7440-62-2	



QUALITY CONTROL DATA

Project: Bremo Monthly Process

Pace Project No.: 92304692

Date: 07/15/2016 11:42 AM

QC Batch: 308592 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET

Associated Lab Samples: 92304692001

METHOD BLANK: 1635371 Matrix: Water

Associated Lab Samples: 92304692001

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	07/14/16 13:56	
Barium	ug/L	ND	10.0	07/14/16 13:56	
Beryllium	ug/L	ND	1.0	07/14/16 13:56	
Boron	ug/L	ND	50.0	07/14/16 13:56	
Cobalt	ug/L	ND	10.0	07/14/16 13:56	
Iron	ug/L	ND	250	07/14/16 13:56	
Molybdenum	ug/L	ND	10.0	07/14/16 13:56	
Vanadium	ug/L	ND	10.0	07/14/16 13:56	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	2500	2380	95	85-115	
Barium	ug/L	250	242	97	85-115	
Beryllium	ug/L	25	25.5	102	85-115	
Boron	ug/L	2500	2450	98	85-115	
Cobalt	ug/L	250	247	99	85-115	
Iron	ug/L	2500	2340	94	85-115	
Molybdenum	ug/L	250	240	96	85-115	
Vanadium	ug/L	250	244	98	85-115	

MATRIX SPIKE & MATRIX SPI	KE DUPLICAT	E: 16353	73		1635374						
			MS	MSD							
	923	304692001	Spike	Spike	MS	MSD	MS	MSD	% Rec		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	Qual
Aluminum	ug/L	258	2500	2500	2650	2650	96	96	70-130	0	
Barium	ug/L	381	250	250	625	620	98	96	70-130	1	
Beryllium	ug/L	ND	25	25	25.8	25.9	102	103	70-130	0	
Boron	ug/L	765	2500	2500	3270	3270	100	100	70-130	0	
Cobalt	ug/L	ND	250	250	252	248	101	99	70-130	2	
Iron	ug/L	ND	2500	2500	2420	2420	94	94	70-130	0	
Molybdenum	ug/L	81.6	250	250	331	326	100	98	70-130	2	
Vanadium	ug/L	27.1	250	250	275	275	99	99	70-130	0	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALIFIERS

Project: Bremo Monthly Process

Pace Project No.: 92304692

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 07/15/2016 11:42 AM

PASI-O Pace Analytical Services - Ormond Beach



Pace Analytical www.pacelabs.com

9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bremo Monthly Process

Pace Project No.: 92304692

Date: 07/15/2016 11:42 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92304692001	T2-160711-2141-S3	EPA 200.7	308592	EPA 200.7	308704



Project Manager SRF Review:

Document Name:

Sample Condition Upon Receipt(SCUR)

Document No.: F-MEC-CS-009-Rev.03 Document Revised: May 24, 2016

Page 1 of 2

Issuing Authority:

Pace Mechanicsville Quality Office

Sample Condition Upon	Client Name:				W0#:92304692
TRéceipt .	Galda.	112		0 10	Project# WOH · 92304032
Courier:	Fed Ex DUPS		7	10	
Commercial	Pace		her:	-	Q2304592
	_/ _			7	32334332
Custody Seal Present?	<u>\</u> Yes □No S ea	als Intact?	□\{	'es [□No 7-17-1/a
Packing Material:	Bubble Wrap	ubble Bags	\Box _V	None	Date/Initials Person Examining Contents: 7-12-16
Thermometer;		azzie bugo	٠.	Wet	Acc and a second
RMD001		Туре	of Ice:	[7] wet	☐Blue ☐None ☐Samples on ice, cooling process has begun
Correction Factor: 0.0°C Temp should be above fre	Cooler Temp Corrected (°	c):	0		Biological Tissue Frozen? Yes No N/A
USDA Regulated Soil (N/A, water sample)				
Did samples originate in a q	uarantine zone within the Unit	ed States: CA	A, NY, or	SC (check	
Yes No					including Hawaii and Puerto Rico)? Yes No
Chain of Custody Present?		N.	П.		Comments/Discrepancy:
Samples Arrived within Hold	Time?	Yes	□No	□N/A	1.
Short Hold Time Analysis (<7		Yes	∐No	□N/A	2.
Rush Turn Around Time Reg		☐Yes	No	□N/A	3.
Sufficient Volume?	uestear	Yes	□No	□N/A	4.
		✓Yes	∐No	□N/A	5.
Correct Containers Used?	*/ · · · · · · · · · · · · · · · · · · ·	¥Yes	□No	□N/A	6.
-Pace Containers Used?		Yes	□No	□N/A	
Containers Intact?		Yes	□No	□ _N /A	7.
Samples Field Filtered?		Yes	□No	ØN/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?		Yes	□No	□N/A	9.
-Includes Date/Time/ID/Ar	nalysis Matrix: WV	<u> </u>			
All containers needing acid/bachecked?	ase preservation have been	Yes			10. _{HNC3 pH<2}
All containers needing preser	vation are found to be in	₩ Yes	□No	□N/A	на рн<2
compliance with EPA recomm					HZSO4 pH<2
(HNO ₃ , H ₂ SO ₄ , HCI<2; NaOH > Exceptions: VOA, Coliform, TO	9 Sulfide, NaOH>12 Cyanide) DC. Oil and Grease	□ Yes	□No	□n/a	NaOH pH>12
DRO/8015 (water) DOC,LLHg	, - in and or case,	□Yes	□No	□N/A	NaOH/ZnOAc pH>9
Samples checked for dechloring	nation?	□Yes	□No	N/A	11.
Headspace in VOA Vials (>5-6	nm)?	□Yes	□No	N/A	12.
Trip Blank Present?		□Yes	□No	N/A	13.
Trip Blank Custody Seals Prese	ent?	☐Yes	□No	M/A	
Pace Trip Blank Lot # (if purcha					
CLIENT NO	TIFICATION/RESOLUTION				Field Data Required? ☐Yes ☐No
Person Contacted:					Date/Time:
Comments/Sample					Date/ fille.
Discrepancy:					
-					
Project Manager SCUR	F Review:				Date:

Date: Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

All analyses to be performed under Golder-Pace MSA dated 12/19/2008 ITEM# 1 6 2 12 9 8 6 5 4 ω Required Client Information Sample IDs MUST BE UNIQUE SAMPLE ID ADDITIONAL COMMENTS 72-160711-21-11-53 Valid Matrix Codes MATRIX CODE DRIMING WATER WWATER WATER WWATER WASTE WATER WW PRODUCT PROLISOLID OL WIPE AIR OTHER OTHER OTHER OTHER TS WW RELINQUISHED BY I AFFILIATION MATRIX CODE (see valid codes to left) O SAMPLE TYPE (G=GRAB C=COMP) # DATE COMPOSITE SAMPLER NAME AND SIGNATURE TIME COLLECTED (who) PRINT Name of SAMPLER: 7/11/16 SIGNATURE of SAMPLER: DATE COMPOSITE END/GRAB 2/10 21:41 07/12/16 TIME DATE SAMPLE TEMP AT COLLECTION 1015 102 # OF CONTAINERS TIME Unpreserved H₂SO₄ 7ame HNO₃ HCI 222 NaOH Na₂S₂O₃ ACCEPTED BY / AFFILIATION Methanol Other Y/N ♣ Analysis Test 200.7 - Al, Ba, Be, B, Co DATE Signed (MM/DD/YY): were Requested Analysis Filtered (Y/N) 200.7 - Fe, Mo, V ASTM4282 - Free Cyanid 07/11/16 7-12-16 DATE 410 1555 u TIME 6 Temp in °C Residual Chlorine (Y/N)

Required Client Information: Address: Company: mail To: Pace Analytical" 2108 W Laburnum Ave, Ste 200 Golder Associates Mormand@golder.com Richmond, VA 23227 Copy To: Martha_Smith@golder.com Report To: Mormand@golder.com Required Project Information: Section B Ron_Difrancesco@golder.com The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. CHAIN-OF-CUST Section C Address: Company Name: Y / Analytical Request Document gaiapdataentry_invoices@golder.com Meagan Ormand Golder Associates REGULATORY AGENCY TSU NPDES RCRA GROUND WATER Page: of. DRINKING WATER 000 803 Page 11 of 17

Requested Due Date/TAT:

F

#3-Day #

Project Name:
Project Number:

Bremo Monthly Compliance
1520-347.226 20.0

Pows

ace Project

Site Location

STATE:

S

92304692 Pace Project No./ Lab I.D. 804-551-0129

Fax: 804-358-2900

Received on

Ice (Y/N)

Custody Seale Cooler (Y/N)

Samples Intac (Y/N) SAMPLE CONDITIONS



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Pace Analytical Services Suite 100 9800 Kincey Ave Huntersville NC 28078

Report Date: July 15, 2016

Project: 92304692

Submittal Date: 07/13/2016 Group Number: 1682138 PO Number: NMG 15753 State of Sample Origin: VA

 Client Sample Description
 (LL) #

 92304692001 T2-160711-2141-S3 Water
 8472324

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/.

Electronic Copy To Pace Analytical Services Attn: Nicole Gasiorowski

Respectfully Submitted,

Bonnie Stadelmann Senior Project Manager

Bornie Stadelmann

(312) 590-3133



Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: 92304692001 T2-160711-2141-S3 Water

LL Sample # WW 8472324 LL Group # 1682138 Account # 10945

Project Name: 92304692

Pace Analytical Services

Suite 100

9800 Kincey Ave

Huntersville NC 28078

Collected: 07/11/2016 21:41

Submitted: 07/13/2016 09:40

Reported: 07/15/2016 09:18

CAT Analysis Name No.

CAS Number

Result

Limit of Quantitation Dilution Factor

Wet Chemistry

OIA-1677-09

mg/l 10.0

12941 Free Cyanide

mg/l n.a. < 10.0

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
12941	Free Cvanide	OIA-1677-09	1	16196941101A	07/14/2016 23:49	Joseph E McKenzie	1



Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Quality Control Summary

Client Name: Pace Analytical Services Group Number: 1682138

Reported: 07/15/2016 09:18

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

 Analysis Name
 Result
 LOQ

 mg/l
 mg/l

 Batch number: 16196941101A
 Sample number(s): 8472324

 Free Cyanide
 < 10.0</td>

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16196941101A	Sample numbe	r(s): 8472	324						
Free Cyanide	0.0400	0.0400			100		86-132		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16196941101A Free Cyanide	Sample numb < 0.0060	er(s): 8472 0.0200	324 UNSP 0.0210	K: P472641 0.0200	0.0217	105	109	86-132	3	3

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

^{*-} Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

8:8472324

G:1682138

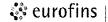
Chain of Custody -



Report / Invoice To Nicole Gasiorowski Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com State of Sample Origin: Tem Sample ID Collect Date/Time Lab ID Matrix Matrix 1 T2-160711-2141-53 Subcontract To Requested Analysis P.O. NMG 15753 Lab ID Matrix Lab ID Matrix Lab ID Matrix Lab ID Matrix	
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Eurofins Lancaster Laboritories ENV. Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com Lancaster , PA 17601 State of Sample Origin: Collect Date/Time Lab ID Matrix P.O. NMG 15753 Lab ID Matrix Lab ID Lab ID Lab ID Matrix Lab ID Lab ID	
Collect Date/Time Lab ID Matrix	
Item Sample ID Date/Time Lab ID Marrix	
1 T2-160711-2141-S3 7/11/2016 21:41 92304692001 Water 2 X X	SE ONLY
2	
3	
4	
5 Comments	
Transfers Released By Date/Time Received By Date/Time	
1 Kachel Du Isuss 7-12-16/1676	
2	
3	
Cooler Temperature on Receipt 2.2 °C Custody Seal Y or N Received on Ice Y or N Samples Intact O or	<u>N</u>

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1



Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID:

153578

Group Number(s): 182138

Client: Pace Analytical

Delivery and Receipt Information

Delivery Method:

Fed Ex

Arrival Timestamp:

07/13/2016 9:40

Number of Packages:

1

Number of Projects:

1

State/Province of Origin:

<u>VA</u>

Arrival Condition Summary

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

Yes

Custody Seal Present:

No

Sample Date/Times match COC:

Yes

Samples Chilled:

Yes

VOA Vial Headspace ≥ 6mm:

N/A

Paperwork Enclosed:

Yes

Total Trip Blank Qty:

0

Samples Intact:

Yes

Air Quality Samples Present:

No

Missing Samples:

No

Extra Samples:

No

Discrepancy in Container Qty on COC:

No

Unpacked by Timothy Cubberley (6520) at 10:03 on 07/13/2016

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler # Thermometer ID

Corrected Temp 2.2

Therm. Type IR

Ice Type Wet

Ice Present?

Ice Container

Elevated Temp?

32170023

Loose

Ν



Lancaster Laboratories Environmental

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basisResults printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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